

From the 16th to 23d the weather was in general better, under prevailingly high pressure in the south.

On the 23d an important depression began to influence southern South America, bringing on a period of bad weather and rains which lasted until the 29th, when the pressure became definitely higher. The maximum precipitation was observed on the 29th, at Valdivia, 44 mm.

A new barometric decline began on the 30th.

METEOROLOGICAL SUMMARY FOR BRAZIL, APRIL, 1926

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During April the circulation of the lower atmosphere continued about as intense as in the preceding month, the anticyclones in the meantime being observed to move along meridional paths. The semipermanent anticyclone of the Atlantic appears to have had less influence over the

continent. The continental depression, and those migrating from high latitudes, were less active.

Over the whole country the amount of rainfall received was rather great, the rivers Poty and São Francisco continuing in a state of flood, as did also the Parintins, the Mearim, and the Itapicurú. In the Province of Rio Grande do Sul excessive rainfalls were recorded, which were abnormal for the season.

The weather in Rio de Janeiro was in general unsettled, 13 cloudy days being recorded, with the雨iest period observed on the 14th-17th. Temperature remained below normal during the last two decades of the month, though in the first decade some high temperatures occurred.

Crops in general did well, except milo, which in Rio Grande do Sul suffered from lack of rain, and coffee which in some localities did not come up to expectations.

The yield of the cereal and vegetable crops was satisfactory, though the same was not the case with beans in the central region of the country.—*Translation.*

BIBLIOGRAPHY

C. FITZHUGH TALMAN, Meteorologist in Charge of Library

RECENT ADDITIONS

The following have been selected from among the titles of books recently received as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies:

Agius, Thomas.

The gregale. Malta. [1926.] p. 3-17. 24½ cm. (Repr.: Archivum Melitense.)

Argentina. Oficina meteorológica.

Predicción del tiempo. El pronóstico semanal del estado del tiempo de la Oficina meteorológica Argentina. Buenos Aires. 1926. 3 p. figs. 23½ cm. (República Argentina. Min. de agric. Sec. propaganda e informes. Circ. no. 596. Marzo 25, 1926.)

Breitfuss, Leonid.

Die Erforschung des Polargebietes Russisch-Eurasiens, Seen- und Landreisen während der Jahre 1912-24. Gotha. 1925. vi, 113 p. tables (fold.) 28 cm. (Petermanns Mitteilungen. Ergänzungsheft Nr. 188.)

Coblentz, W. W.

Frost flowers. The result of exudation of ice from the stems of plants. p. 682-684. illus. 30 cm. (Cutting from Amer. forests, v. 31, Nov., 1925.)

Coleman, Arthur P.

Ice ages, recent and ancient. New York. 1926. xlvi, 296 p. front. illus. (incl. maps). 22½ cm.

Deutsche Atlantische Expedition auf dem Forschungs-und Vermessungsschiff "Meteor."

77 p. figs. plates. 25½ cm. (Sonderab: Zeitschr. Gesellsch. für Erdkunde zu Berlin. Jahrg. 1926, Nr. 1.)

Deutsche meteorologische Gesellschaft.

Berliner Zweigverein der Deutschen meteorologischen Gesellschaft. Bericht 1916-1925. (33.-42. Vereinsjahr.) Berlin. 1926. 14 p. port. 22 cm.

Fieldner, A. C., and others

Sugar-tube method of determining rock dust in air. Washington. 1921. 42 p. figs. plates. 23½ cm. (U. S. Bur. mines. Tech. paper 278.)

Granqvist, Gunnar.

Översikt av isarna vintern 1914-15. Helsingfors. 1926. 45 p. illus. 24½ cm. (Referat: Uebersicht der Eisverhältnisse im Winter 1914-15 an den Küsten Finnlands.) (Havsforskningsinstitutets skrift N:o 37.)

Regelmässige Beobachtungen von Temperatur und Salzgehalt des Meeres im Jahre 1923. Helsingfors. 1925. 53 p. illus. 24½ cm. (Merentutkimuslaitoksen julkaisu havsforskningsinstitutets skrift n:o 34.)

Högberg, L.

Om sockerbetsodlingens klimatiska betingelser och bevattningsproblemet. Stockholm. 1926. 11 p. figs. 31½ cm. (Meddelanden Statens met.-hydrog. anstalt. Bd. 3, N:o 7.)

International research council.

First report of the commission appointed to further the study of solar and terrestrial relationships. Paris. 1926. 202 p. 25½ cm.

Italy. Servizio idrografico.

Le irrigazioni in Italia. Notizie preliminari sulla estensione delle irrigazioni, sulle modalità di esse e sui prezzi praticati nelle diverse regioni italiane. Roma. 1926. 280 p. figs. plates (part fold.) 25½ cm. (Pubb. N. 8 del servizio. vol. 1.)

Jurwa, Risto.

Jääv vuonna 1919-1920. Helsinki. 1925. iv, 139 p. figs. plates (fold.) 25 cm. (Referat: Das Meereis im Winter 1919-1920.) (Merentutkimuslaitoksen julkaisu n:o 23.)

Översikt av isarna vintern 1919-20. Helsingfors. 1926. 28 p. illus. plates. 25 cm. (Referat: Uebersicht der Eisverhältnisse im Winter 1919-20 an den Küsten Finnlands.) (Havsforskningsinstitutets skrift N:o 23.)

Laffont, J. C.

Pluie ou beau temps? Prévision du temps à faible échéance. Construction facile d'appareils météorologiques (baromètres, hygromètres, pluviomètres, néphoscopes, anémomètres, psychromètres, etc.) Paris. n. d. 147 p. illus. 17½ cm.

Maurain, Ch., and others.

Atlas magnétique . . . avec la collaboration de L. Eblé . . . Paris. 1925. viii, 16 p. figs. plates. 32 cm.

Merz, A.

Die Deutsche Atlantische Expedition auf dem Vermessungs- und Forschungsschiff "Meteor." I. Bericht. p. 562-586. figs. plates (fold.) 25½ cm. (Sitzungsber. preuss. Akad. Wissensch. XXXI. Sitzungsber. phys.-math. Kl. 26. Nov. 1925.)

Negretti & Zambra,

History of the thermometer. [London.] n. d. 8 p. illus. 19 cm.

Niblack, A. P.

Summary of data on wind force and the Beaufort scale. Monaco. 1926. 36 p. 27½ cm. (Internat. hydrog. bur. Spec. pub. no. 11-H. April, 1926.)

Östman, C. J.

Om stormar vid Svealands och Götalands kuster. (Les grands vents près des côtes du Svealand et du Götaland. Stockholm. 1926. 37 p. figs. 31½ cm. (Meddelanden Statens met.-hydrog. anstalt. Bd. 3 N:o 6.) [Résumé in French.]

Palmen, Erik.

Beobachtungen von Strom und Wind an den Leuchtschiffen im Jahre 1923. Helsingfors. 1925. 26 p. illus. 24½ cm. (Merentutkimuslaitoksen julkaisu havsforskningsinstitutets skrift n:o 33.)

Paredes y Castro, José García de.

Meteorología náutica y oceanográfica. Ed. 2. Barcelona. [1925.] 414 p. illus. plates. 25½ cm.

Reenen, R. J. van.

Note on the apparent regularity of the occurrence of wet and dry years in south-west Africa. p. 94-95. 24½ cm. [So. Afr. journ. sci., v. 22, Nov. 1925.]

Schmidt, Wilhelm.

Der Massenaustausch in freier Luft und verwandte Erscheinungen. Hamburg. 1925. viii, 118 p. figs. 24 cm. (Probleme der kosmischen Physik, no. 7.)

Schonken, J. D.

Effective rainfall. p. 96-103. figs. 24½ cm. [So. Afr. journ. sci. v. 22, Nov. 1925.] [Bd. with Reenen, R. J. van. Note on the apparent regularity of the occurrence of wet and dry years in south-west Africa.]

Sernander, Rutger.

Klimaverschlechterung, Postglaziale. p. 6-8. 26 cm. (Realexikon der Vorgeschichte, Berlin.)

Smith, Edward H.

Practical method for determining ocean currents. Washington. 1926. vi, 50 p. figs. 23½ cm. (U. S. Coast guard. Coast guard bull. no. 14.)

Swoboda, Gustav.

Meteorologische Betrachtungen zu den Flügen Eckeners und Amundsen. 7 p. figs. 30 cm. (Flugwesen, Prag. H. 4, 1926.)

Vernon, H. M., & others.

Methods of investigating ventilation and its effects. London. 1926. 71 p. illus. plates. 25 cm. (Privy council. Med. res. coun. Spec. rep. ser. no. 100.)

Vincent, J.

Sur la théorie des cyclones et des anticyclones. Bruxelles. 1926. 9 p. 25½ cm. (Acad. roy. de Belgique. Extr.: Bull. classe des sci. Séance du 6 mars 1926.)

Winslow, Charles E. A.

Fresh air and ventilation. New York. [c1926.] xi, 182 p. 19½ cm.

Witting, Rolf.

Havsforskningsinstitutets värksamhet under år 1924. Helsingfors. 1925. 22 p. 23 cm. (Havsforskningsinstitutets skrift n:o 35.)

Woolard, Edgar W.

Trees favored and hated of Jove. The truth about the popular belief that certain species of trees are subject to the attacks of lightning. p. 259-261. illus. 30 cm. (Cutting from Amer. forests, v. 32, May, 1926.)

RECENT PAPERS BEARING ON METEOROLOGY

The following titles have been selected from the contents of the periodicals and serials recently received in the library of the Weather Bureau. The titles selected are of papers and other communications bearing on meteorology and cognate branches of science. This is not a complete index of all the journals from which it has been compiled. It shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau.

Aerologist. Chicago. v. 2. May, 1926.

Armstrong, O. W. A discussion of the design of refrigeration plants with calculations, charts, and test data. p. 15-17.

Misostow, Henry. A plan to secure fresh air and sunshine for cities. p. 11-13.

American journal of science. New Haven. (5) v. 11. June, 1926.

Allan, J. A. Ice crystal markings. p. 494-500. [In reference to fossil ice crystals.]

American society of heating & ventilating engineers. Journal. N. Y. v. 32. June, 1926.

Lewis, Thornton. Observing warm air in circulation. p. 451-460.

Annalen der Hydrographie und maritimen Meteorologie. Berlin. 54. Jahrgang. März 1926.

Mey, A. Thermogramme von der Kurischen Nehrung. p. 105-114.

Myrbach, Otto. Das Atmen der Atmosphäre unter kosmischen Einflüssen. p. 94-105.

France. Académie des sciences. Comptes rendus. Paris. t. 182. 1926.

Baldet, F., Burson, V., & Grenat, H. Sur la perturbation magnétique et l'aurore boréale du 14 avril 1926. p. 962-963. (19 avril.)

Dauzère, C. Sur les inversions de la température. p. 978-980. (19 avril.)

Legrand. Sur une relation entre les amplitudes des crues annuelles du Nil, du Niger et du Mékong. p. 1286-1287. (25 mai.)

Hemel en dampkring. Den Haag. 24 jaargang. Juni 1926.

Van Dijk, G. Het poollicht in het begin van 1926 met een overzicht van de voorafgaande jaren. p. 203-214.

Marine observer. London. v. 3. July, 1926.

Durst, C. S. Thermometer screens for use at sea. p. 112-114.

Hennessy, J. Cyclones of the Bay of Bengal. p. 115-117.

Matériaux pour l'étude des calamités. Genève. Année 2. Janvier-mars 1926.

Toulaikoff, N. M. La lutte contre la sécheresse dans la région du Volga. p. 308-338.

Vallaux, Camille. Le danger des icebergs sur les routes maritimes de l'Atlantique nord. p. 283-307.

Meteorological magazine. London. v. 61. May, 1926.

Aeroplane struck by lightning. p. 89.

Experiments with a shielded rain gauge. p. 87-88.

Geake, E. H. The cold nights at Garforth. p. 77-82.

Vigurs, J. T. C. An unusual mock sun. p. 91-92. [About 10 degrees from the sun.]

Meteorologische Zeitschrift. Braunschweig. Band 43. Mai 1926.

Ficker, H. v. Maskierte Kälteeinbrüche. p. 186-188.

Köppen, W. Der jährliche Temperaturgang in den gemäßigten Zonen und die Vegetationsperiode. p. 161-172.

Lanner, Alois. Die Mondphasen in ihrer Beziehung zur Schönwetterfrage. p. 185-186.

Loewe, Fritz. Nebensonnen einer Untersonne. p. 183-184.

Meyer, Rud. Barometrische Höhenmessungen. p. 178-179.

Obolesky, W. N. Der elektrische Zustand der unteren Atmosphärenschichten an klaren Tagen zu Pawlowsk. (1916 bis 1920). p. 173-178.

Schmidt, Ad. Einige Bemerkungen zu dem Aufsatz von A. Kulakoff und W. Witkewitsch: Über die Wirkungsmittelpunkte (Aktionszentren) der Atmosphäre. p. 179-182

Nature. London. v. 117. 1926.

Phillips, J. B. Seasonal sunshine in Great Britain. p. 757. (May 29.)

Cave, C. J. P. A very rare halo. p. 791. (June 5.) [Rankin's halo observed and photographed.]

Revue du ciel. Bourges. 11. année. Juin 1926.

Cellerier, L. Reverrons-nous les beaux étés? p. 101-104.

Wetter. Berlin. 43. Jahrgang. April 1926.

Duckert, Paul. Drahtlose Energieübertragung und die Wetterlage. p. 80-84.

Fischer, Rudolf. Der frostfreie, äusserst milde Februar 1926 in Frankfurt a. M. p. 90-92.

Hoeller, Otto. Über das Strahlungsklima des Rheinstromgebietes. p. 73-80.

Linke, F. Die Rosdorfer Naturerscheinung vom 9. März 1926. p. 92-93.

Lühe. Höhenmeldungen von den Ozeanen zur Unterstützung der Luftschiffahrt. p. 89-90.

Troeger, Heinz. Gradient und Frontenzug. p. 93-96.